AMENDMENTS

Please enter the following amendments.

<u>In the Specification:</u>

Please replace the paragraph beginning on page 4, line 13, with the following paragraph:

--According to an embodiment of the present invention, a driver having a current control device for a voice coil motor in a disk drive is provided. The driver includes a sensor to sense a coil current in the voice coil motor. The driver also includes a transconductance amplifier to detect an error current from the coil current and the command current. The driver also includes a compensator to integrate the error current into the coil current.--

Please replace the paragraph beginning on page 9, line 19, with the following paragraph:

--Microprocessor 12 implements a servo controller program by executing an estimator 38 control loop program. This action controls the current to VCM 20 through digital-to-analog converter 22 and current driver 36. Current driver 36 provides current to VCM 20 through line 35. Microprocessor 12 receives servo position information read by head 30 from media 28. The position information is amplified by pre-amplifier 31 and demodulated by servo channel 25.--

Please replace the paragraph beginning on page 10, line 17, with the following paragraph:

--Fig. 2 depicts a pure torque voice coil motor driver configured to a track following mode in accordance with an embodiment of the present invention. Track following mode indicates that the mechanical assembly is moving the head to follow a

track. A force couple should be created, as disclosed above. Actuator assembly 200 includes VCM 204. Driver 202 provides current and control for VCM 204. Driver 202 may receive commands from a microprocessor and current commands from a DAC to place VCM 204 into different modes or to perform various operations. Driver 202 may be integrated in the power integrated chip ("IC") that is located on the drive PCB.--

Please replace the paragraph beginning on page 12, line 3, with the following paragraph:

-- Driver 202 may desire to know whether the current through VCM 204 is at or about the current specified by current command 230 from the DAC programming. The claimed embodiments of the present invention detect the current within VCM 204 and controls the current from amplifiers 216 and 218 to approximate the current defined by current command 230. Transconductance amplifier 226 and integrator/compensator 224 detect an error current within VCM 204 and integrate the error current into the command current.--

Please replace the paragraph beginning on page 13, line 12, with the following paragraph:

--By adding the integrator/compensator 224 after the error current is determined, the potential for DC error is reduced. Integrator/Compensator 224 includes a resistor in series with the capacitor. A time constant may be built with integrator/compensator 224, causing a time phase lag.--

Please replace the Abstract section, beginning on page 30, line 2, with the following paragraph:

--A driver device and method for pure torque voice coil motor is disclosed. The driver includes a current control device for the voice coil motor. The driver also includes a sensor to sense a coil current to the voice coil motor. The driver also includes a transconductance amplifier to detect an error current from the coil current and a command current. The driver also includes an integrator/compensator to integrate the error current into the coil current. In another configuration, the driver is a driver having a current controller for the voice coil motor in a seek mode. The driver includes a set of transistors coupled to the voice coil motor by a center tap. The set of transistors supply a coil current having a waveform to the center tap. The driver also includes a current sense amplifier to detect the coil current. The driver also includes a comparator to shape a command current waveform to the coil current waveform. The driver also includes a bipolar switch control to receive the command current waveform and to saturate the set of transistors. In another configuration, the driver is a driver for controlling the voice coil motor during retract mode. The voice coil motor has a first coil motor and a second coil motor. The driver includes a sensor to sense a velocity voltage across the second coil motor. The driver also includes an error amplifier to calculate a differential between the velocity voltage and a command voltage. The driver also includes a retract amplifier to compensate the command voltage with the differential.--